

Project Info



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CC5™ Bulk Rolls



255m²



Vertical layers



Bogotá D.C. ,
Cundinamarca,
Colombia



MERT S.A.S.



CC5™ used to protect a slope and prevent surface erosion and degradation which was causing material to fall into a nearby road.



Completed installation

In October 2012, Concrete Canvas® (CC) GCCM* was used to protect a roadside embankment in Cundinamarca, Colombia, and prevent further weathering erosion.

The slope had degraded to the point that traffic on the nearby road was at risk from falling rock and debris. Shotcrete or mortar slab had originally been considered for the project, but CC was chosen due to its speed and ease of installation, uniformity and consistency compared to shotcrete. It also allowed greater flexibility in terms of site access, as the installation team were unable to use heavy plant at the crest of the slope.

Bulk rolls of CC5™ were delivered on site which were then cut into 12 linear metre lengths to match the average height of the slope. The rolled lengths were mounted onto a spreader beam which was towed to the crest of the slope with ropes. The CC was then fixed securely to the crest with 250 x 12mm steel ground pegs into the soil substrate before unrolling down the embankment. Sikaflex 1A and CT1 adhesive were used to fix the CC to several PVC drainage tubes protruding from the slope, whilst 30mm screws were used to joint overlapping layers of CC. Hilti expansion anchors were used to fix the CC to the slope in overhanging sections to avoid voids between the material and the uneven profile. Following installation, hydration was given via a pump and bowser.

*Geosynthetic Cementitious Composite Mat





Project site prior to works



Site preparation including removal of vegetation and loose substrate



Pre-cut batched rolls of CC on rope mounted spreader beam



CC secured in anchor trench with ground pegs



CC overlaps double screwed at 120mm intervals



Expansion anchors used to close voids between CC and uneven profile



Anchor trench at top of slope backfilled with soil and rock for better stability



CC was able to conform to complex surface of slope



CC painted with standard masonry paint after installation

The installation team were impressed by the speed and ease of installation of CC on a site with heavily restricted access. The client was pleased with the aesthetic quality of the finished project and how the drape characteristics of CC5™ resulted in an organic, rock-like appearance. A 5-man installation team were able to complete the entire 255m² installation, including site preparation, in 8 days without specialist training or plant equipment.